Feed the Future Country Fact Sheet

Online Version: https://www.feedthefuture.gov/article/bangladesh-shrimp-hatchery-goes-zero-hero

A Bangladesh Shrimp Hatchery Goes from "Zero to Hero"

Moana Technologies

A shrimp farmer examines black tiger shrimp in Bangladesh.

World shrimp production tops six million metric tons each year, and demand for this shellfish is still growing. In many developing countries, this trend translates into jobs and income from shrimp farming. Bangladesh, a Feed the Future focus country, produces and exports nearly 70,000 tons of shrimp each year, amounting to more than half a billion U.S. dollars and employing more than 1.2 million people.

The news hasn't all been good, however. Most of Bangladesh's exported shrimp comes from 300,000 small aquaculture farms that rely on hatchery-produced wild broodstock—a group of mature individuals used in aquaculture for breeding purposes—for their supply of post larvae. Wild broodstock is risky because it is often infected with pathogens such as the highly lethal and contagious white spot syndrome virus, which can wipe out a shrimp population within a few days.

Hawaiian biotechnology company Moana Technologies spent more than a decade developing a solution to this problem by breeding a new line of disease-free black tiger shrimp. This shrimp line has key advantages over shrimp from wild-broodstock post larvae. First, it grows faster, allowing farmers to produce at least two crops per year. Second, it boasts a much higher survival rate of 80 percent, which means farmers can stock less of the new line. Third, the disease-free shrimp falls into a larger size category and, thus, command a higher price.

In 2014, Moana received funding from Feed the Future Partnering for Innovation, a USAID program that develops public-private partnerships to commercialize agricultural technologies for smallholder farmers. With the funding, Moana was able to transfer its shrimp breeding technology to Bangladesh through a Bangladeshi shrimp hatchery, MKA Hatchery. Unlike other hatcheries, MKA was owned by Main Uddin Ahmad, a former fighter pilot in the Bangladeshi Air Force, who saw the potential for a new way of doing business. Ahmad brought a passion to help the smallholder farmers of his country and invested personal finances to upgrade his facilities.

In collaboration with USAID's Aquaculture for Income and Nutrition project, and using the funding from Partnering for Innovation, Moana began working with MKA Hatchery to transfer its shrimp breeding technology to Bangladesh, identifying a successful shipment approach after some trial and error. Partnering for Innovation also contributed additional technical assistance funds so Moana experts could train the MKA staff in proper broodstock feeding and reproduction techniques.

During the 2015 shrimp season, MKA has successfully raised and sold 25 million disease-free shrimp post larvae, increasing the productivity and incomes of several large-scale and more than 500 smallholder shrimp farmers. With Moana's expertise and funding from USAID's Aquaculture for Income and Nutrition project, MKA's goal, in collaboration with three other private shrimp hatcheries, is to produce 500,000 million post larvae this year.

With USAID funding, Moana's partnership with MKA Hatchery is changing the shrimp industry in Bangladesh and making it possible for the country's smallholder shrimp farmers to make a better living. The attitude of hatcheries is changing, and the Government of Bangladesh has the grounds to be stricter on supply of infected post larvae because, now, there is an alternative. As Ahmad says, "Innovation has to move fast. When progress was hard and failure was possible, Feed the Future helped us go from zero to hero."